

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (currently amended) A recombinant protein comprising:
  - (a) a first protein that is a motor domain of myosin, or an analog, fragment or derivative thereof; and
  - (b) a target protein of interest, the purification and crystallization of which is desired; and
  - (c) a linker between (a) and (b).
2. (canceled)
3. (currently amended) The recombinant protein of claim 2\_1, wherein (e) the linker comprises at least 2 amino acids.
4. (previously presented) The recombinant protein of claim 1, wherein (b) is any amino acid sequence of at least 20 amino acids.
5. (canceled)
6. (currently amended) The recombinant protein of claim 5\_1, wherein (a) is has an amino acid sequence chosen from the group consisting of an amino acid sequences of a member of the myosin I, II, III, IV, V, VI, VIII, X or XI families, or the kinesin I or II families, or an analog, fragment or derivative thereof.
7. (canceled)
8. (currently amended) The recombinant protein of claim 3\_1, wherein (c) comprises a sequence of 3 amino acids, wherein Gly is in the second position.

9. (currently amended) The recombinant protein of claim 4 1, wherein (b) comprises the amino acid sequence of an esterase, hydrolase, phosphatase, kinase, protease, channel protein, structural protein, receptor, transcription factor, DNA/RNA-binding protein, lipoprotein or glycoprotein, or an analog, derivative or fragment thereof.
10. (currently amended) The recombinant protein of claim 9, wherein (b) is selected from the group consisting of the structural proteins coronin or spectrin, and a neuronal or immunologically relevant receptor associated with neuronal or immunologic function.
11. (currently amended) The recombinant protein of claim 1, wherein (a) comprises an amino acid sequence of ~~SEQ ID NO. 1~~ SEQ ID NO: 1.
12. (previously presented) The recombinant protein of claim 11, wherein (c) comprises the amino acid sequence Leu-Gly-Ser.
13. (previously presented) The recombinant protein of claim 1, further comprising a tag sequence at the protein's N- or C-terminus.
28. (previously presented) A protein crystal having a crystal lattice formed by a network of recombinant proteins of claim 1.
30. (new) The recombinant protein of claim 1, wherein (c) comprises a protease cleavage site.
31. (new) The recombinant protein of claim 30, wherein the protease cleavage site contains a recognition sequence for a protease selected from the group consisting of factor Xa, thrombin, TEV and Soldati protease.

32. (new) The recombinant protein of claim 31, wherein the recognition sequence is ENLYFQG.